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| 10/614,134 | 07/08/2003 | Kenichi Sakamoto | 501.37526CX1 | 5988 |

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| EXAMINER |
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LEVITAN, DMITRY

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| ART UNIT | PAPER NUMBER |
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2416

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01/28/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/614,134 | Applicant(s) SAKAMOTO ET AL. | |
| | Examiner Dmitry Levitan | Art Unit 2416 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-19 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-19 and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Amendment, filed 12/03/08, has been entered. Claims 2-19 and 21-23 remain pending.

Claim Rejections - 35 USC § 103

1. Claims 2-19, 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCloghrie (US 6,035,105) in view of Chase (US 6,081,524).

2. Regarding claims 2, 5, 6, 9 and 10, McCloghrie substantially teaches the limitations of claims:

A packet communication apparatus, method and system to transmit a packet from a first network to a second network (LAN switch 103 and two networks 102 on Fig. 1 and 2:33-49, each network comprises appropriate VLAN), wherein the packet includes destination address (inherently part of any packet, because a destination address is essential for packet routing) and a Virtual Private Network/VPN identifier (each VLAN identifies each frame/packet with a VLAN identifier 1:50-65, shown on Fig. 1 and 2 as tag 107) used to compose first VPN in the first network comprising:

A packet generating unit/router which generates a second VPN identifier used to compose a second VPN in the second network based on the destination address and information in the first VPN identifier (LAN switch 103 on Fig. 1 and 3:7-14 generating a second header by changing tag 107 as shown on Fig. 2 and 3:49-67, changing the first VLAN identifier to a second VLAN identifier 1:59-63); and

A transmitter, which transmits a packet having thereto said second VPN identifier (LAN switch 103 on Fig. 1 and 3:7-14 changing VLAN identifier 1:59-63)

wherein the first VPN is interconnected to the plurality of VPNs in the second network (first VLAN 106, shown on an upper portion of Fig.1, interconnected through LAN switch 103 to a second network 102, shown on the bottom portion of Fig. 1, comprising multiple VLANs with unique names, as shown on Fig. 3 and disclosed on 5:35-47).

McCloghrie teaches the networks as LANs utilizing the packets with MAC address (disclosed on 4:33-44) and use of layers 2 and 3 in the LAN switch 103 operation (disclosed on 2:42-46 and 3:24-37).

McCloghrie does not teach implementing his method in IP environment, wherein the packets are IP packets and VPN identifiers are on Layer 2 and the destination IP address is on layer 3.

Chase teaches composing Virtual Private Networks in IP environment, as switch 402 to connect a frame relay (or ATM) network to Virtual Private IP networks VPN A and VPN B, shown on Fig. 7 and 9 and disclosed on 5:45-6:12 and 6:51-7:12), wherein layer 2 frames carry layer 3 address information, which is extracted and used for routing the frames in Virtual Private IP networks, as disclosed on 3:25-41, including IP address on 4:42-44).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add implementing his method in IP environment, wherein the packets are IP packets and VPN identifiers are on Layer 2 and the destination IP address is on layer 3 to the system of McCloghrie to implement the method in widely used IP networks, like Internet.

In addition, regarding claim 6, McCloghrie teaches receiving the packet (3:7-14).

3. Regarding claims 3, 7 and 11, McCloghrie teaches replacing the first identifier with the second identifier (VLAN identifier replacement process 1:59-63).

4. Regarding claims 4, 8 and 12, McCloghrie teaches a route decision processing unit (LAN switch 103) which routes the packet to the second network according to the destination address (MAC address 4:33-44) and information in the first header (VLAN identifier/tag 107 4:62-64) using IP address of Chase instead of MAC address, as shown above.

5. Regarding claims 13, 16, 17 and 21, McCloghrie substantially teaches the limitations of claims:

A packet communication apparatus, method and system to transmit a packet from a first network to a second network (LAN switch 103 and two networks 102 on Fig. 1 2:33-49, each network comprises appropriate VLAN), wherein the packet includes destination address (inherently part of any packet, because a destination address is essential for packet routing) and a first VPN identifier (each VLAN identifies each frame/packet with a VLAN identifier 1:50-65, shown on Fig. 1 and 2 as tag 107) used to compose first VPN in the first network comprising:

An index and packet generating unit/router which generates a second VPN identifier used to compose a second VPN network in the second network based on the index, as the index is based on the destination address and the first identifier (LAN switch 103 on Fig. 1 and 3:7-14 generating a second VLAN identifier by changing index/tag 107 as shown on Fig. 2 and 3:49-67, based on the index/tag in table 206 as shown on Fig. 2 and 5:2-33, according to the VLAN identifier replacement process 1:59-63); and

A transmitter which transmits a packet having thereto said second VPN identifier (LAN switch 103 on Fig. 1 and 3:7-14).

McCloghrie teaches networks as LANs utilizing the packets with MAC address (4:33-44) and use of layers 2 and 3 in the LAN switch 103 operation (disclosed on 2:42-46 and 3:24-37).

McCloghrie does not teach networks implementing IP and the IP packets including IP address wherein the packets are IP packets and VPN identifiers are on Layer 2 and the destination IP address is on layer 3.

Chase teaches composing Virtual Private Networks in IP environment, as switch 402 to connect a frame relay (or ATM) network to Virtual Private IP networks VPN A and VPN B, shown on Fig. 7 and 9 and disclosed on 5:45-6:12 and 6:51-7:12), wherein layer 2 frames carry layer 3 address information, which is extracted and used for routing the frames in Virtual Private IP networks, as disclosed on 3:25-41, including IP address on 4:42-44).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add implementing his method in IP environment, wherein the packets are IP packets and VPN identifiers are on Layer 2 and the destination IP address is on layer 3 of Chase to the system of McCloghrie to implement the method in widely used IP networks.

6. Regarding claims 15, 19 and 23, McCloghrie teaches a route decision processing unit (LAN switch 103) which routes the packet to the second network according to destination address (MAC address 4:33-44) and information in the first header (VLAN identifier/tag 107 4:62-64) using IP address of Chase instead of MAC address, as shown above.

7. Regarding claims 14, 18 and 22, McCloghrie teaches replacing the index with a second VPN identifier (removing an identifier/tag of the first network with appropriate encapsulation/header and identifier for the second network 1:50-67 and 2:1-6).

Response to Arguments

1. Applicant's arguments with respect to claim 2-19 and 21-23 have been considered but are moot in view of the new ground(s) of rejection.

On pages 9 of the Response, Applicant argues that limitations, directed to “first and second VPN identifiers being on L2 and the destination IP address being on L3 are well known and as such not being recited in the claims” and argues that the amended claims comprising the cited well known limitations are patentable over McCloghrie.

These arguments are self contradictory, as well known methods or steps are obvious over the teaching of McCloghrie and therefore are not patentable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2416

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dmitry Levitan/
Primary Examiner, Art Unit 2416

Dmitry Levitan
Primary Examiner
Art Unit 2416